REPORT NO. 79-3-6

FOREST INSECT AND DISEASE MANAGEMENT UNIT
U.S. FOREST SERVICE
DORAVILLE, GEORGIA

REPORT OF AERIAL DETECTION SURVEY

LAND OWNERSHIP OR SURVEY AREA: Cottonwood Plantations Along the Mississippi River

STATES: Mississippi, Louisiana, **Arkansas**

AREA WITHIN SURVEY BOUNDARY: 34,500 acres

DATE: 9/11-15/78

AIRCRAFT: Cessna 206

CREW: W. A. Carothers, B. I. Hammond, F. Oliveria, M. L. Garrett

REPORT PREPARED BY: W. A. Carothers

SURVEY OBJECTIVES: To estimate defoliation of known cottonwood (*Populus deltoides*) plantations caused by poplar tentmaker (*Icthyura inclusa* Hbn.) and to locate other plantations which may be potential host of poplar tentmaker.

SURVEY RESULTS

Twenty-one cotton plantations (refer to maps) ranging in size from 100 acres to 15,000 acres were aerial surveyed. The degree of defoliation varied between plantations from undetectable to severe. The degree of defoliation also varied greatly within plantations (refer to table).

CONCLUSIONS

Poplar tentmaker larvae caused severe defoliation in cottonwood plantations along the Mississippi River. In addition to defoliation caused by poplar tentmaker, defoliation due to the extreme drought conditions of 1978 and several leaf and stem tissue pathogens is occurring. A follow-up survey to estimate defoliation in the survey area will be conducted during October 1978 while the fourth poplar tentmaker generation is active.

For any additional information, Contact:

Forest Insect and Disease Management Unit, S&PF
USFS - Southeastern Area

Northgate Office Park
3620 Interstate 85, N.E.
Doraville, GA 30340
Telephone: 404-221-4796

or

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Pineville, LA 71360
Telephone: 318-445-6511

U.S.D.A. FOREST SERVICE AERIAL SURVEY TEAM

AERIAL DETECTION SURVEY
9/11-15/78

Counties within the general survey area

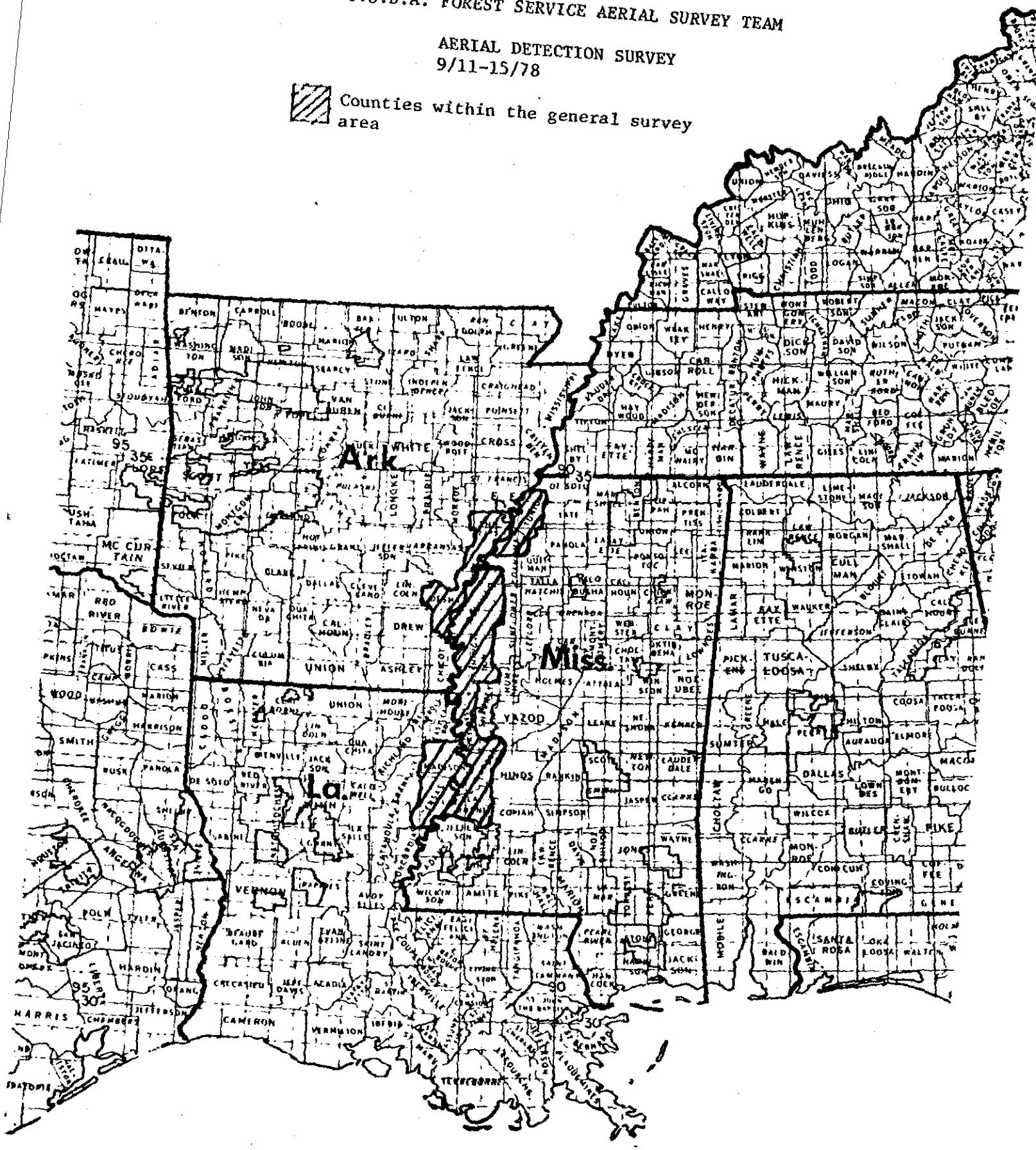

Table 1. Observed Defoliation of Cottonwood Plantations Surveyed 9/11-15/78.

Plantation No.	Degree of Defoliation[1/]	Comments
1	85%	Defoliation "patchey" throughout plantation
2	90%	Defoliation "patchey" throughout plantation
3	50%	Consistent defoliation throughout
4	60%	Consistent defoliation throughout
5	70%	Consistent defoliation throughout
6	70%	Consistent defoliation throughout
7	95%	Consistent defoliation throughout
8	70% - 90%	Throughout plantation
9	60% - 80%	Throughout plantation
10	30%	Consistent throughout
11	50% - 75%	Heavier defoliation on the southern part of plantation
12	0% - 20%	Extremely light
13	0% - 20%	Extremely light
14	0%	
15	0%	
16	40%	
17	0%	
18	0%	
19	0%	
20	30%	
21	0%	

1/ This is the percent defoliation of individual trees in the plantation.

U.S.D.A. FOREST SERVICE AERIAL SURVEY TEAM

COTTONWOOD DEFOLIATION SURVEY
9/11-15/78

▲ COTTONWOOD PLANTATION (location approximate)

▲1

▲2

LINCOLN COUNTY
DESHA COUNTY
ARKANSAS
DESHA
COUNTY
BOLIVAR COUNTY
DESHA COUNTY
COAHOMA COUNTY
SUNFLOWER COUNTY
STATE PENAL
FARM
Gould
Reedville
Mayer
Dumas
Watson
Red Fork
Red Ridge
Tarsopolin
Medford
Medina
WHITE
RIVER
NWR
BIG ISLAND
Island No 711
Concordia Island
Shelby
Boggy Bottom
Mound
Bayou
Rosedale
Rosedale
Cleveland
Cleveland Crossing
Drew
Ruleville
Cottondale
Eastland
Blaine
Pentecost
Sunflower
Island No 74
MISSISSIPPI
ARKANSAS
Oakdale
Valley Farm
Florence
Old Union
Warrenton
Garrett Bridge
Rose Hill
Gourd
Omega
Pickens
Tillar
Selma
McArthur
Kelso
Indian Point
Caulk Point
Eulaw
Choctaw Bar
Tomahead
Lahoma
Hannah
Grassland
Turners Flat
Meltonia
Lees Flat
Shaw
Scott
Busby Chactaw
Lamont
Nazrene
Dewey
Gaines
Island No 81
Island No 82
Bowman
Macon Lake
Yellow Bayou
McMillan Corner
Luna
Leland
Vaucluse
Lake Village
Ferry
Myrtle Grove
Tiddall
Ashton
Cosgrove
Sunnyside
Refuge
Fairview
Jennie
Eminence
Lakeport
Tecumseh
Harwood
Island No 86
Island No 87
Island No 88
Island No 89
Chicot Junction
Gum Corner
Eudora
Ross Van Ness
Johnson
Nilmot
Arkla
Valewood
Trotter Junction
Masonville
Desha
Cominto
Lookout Tower
Dermott
Halley
Huntington
Island No 9
DESHA
CHICOT
COUNTY
COUNTY
BOLIVAR COUNTY
WASHINGTON COUNTY
Greenville AFB/Mun
STONEVILLE
GAME REFUGE
Abide
Metcalfe
Dunleith
Holly Ridge
Heathman
Indianola
Indianola Legion
Micro wave tower
Baird
Markham
Helm
Napanee
Winterville
Bell
Brighton
Columbus
GREENVILLE
Leland
Huntley
Hollycross
Genelle
Woodburn
Montgomery
Inverness
Bowles
Tribbett
Bourbon
Waco
Kinlock
Gumwood
Wilmot
McGrath
Arcola
Manhattan
Isola
Belzoni
Bell Island
Nayside
McCutcheon
Avon
Empire
Darlove
Hollandale
Lock No 1
LEROY PERCY
STATE PARK
Cleary
Longwood
Lake Washington
YAZOO
NATIONAL
WILDLIFE
REFUGE
Eding Farm
Panther Burn
Alhambra
Hampton
Glen Allan
Woodside
Tanner
Nitta Yuma
Davis
Gamet
Delta City
Hines
Auten
Richey
Midnight
Rome
Louise
Gooden Lake
Fern
Lake
Roundaway
Cottonwing
Fairview
Boyce
Busby
Chactaw
Graball
Lake
Lake
Lake

WEST CARROLL PARISH
EAST CARROLL PARISH
MOREHOUSE PARISH
RICHLAND PARISH
MADISON PARISH
FRANKLIN PARISH
TENSAS PARISH
WARREN COUNTY
ISSAQUENA COUNTY
SHARKEY COUNTY
YAZOO COUNTY
HUMPHREYS COUNTY
CLAIBORNE COUNTY
HINDS COUNTY
LOUISIANA
MISSISSIPPI
DELTA
NATIONAL
FOREST
VICKSBURG
VICKSBURG NATIONAL MILITARY PARK
Providence
Oak Grove
Bayou Meadows
Hollybrook
Transylvania
Grimes
Alsatia
Roosevelt
Sondheimer
Tallulah
Scott
Englewood
Barnes
Thomastown
Mound
Delta
Red Board
Lake Nick
Tensas Bluff
Newlight
Lorelein
Griffin
Delhi
Oil and Gas Field
Gas Field
Oil Field
Bear Skin
Goodwill
Kelly
Fiske
Roberts
Chickasaw
Shelburn
Pittman Island
Issaquena
Onward
Blanton
Smedes
New Fitler
Beasley
Indian mound
Valley Park
Bellevue
Brunswick
Eagle Bend
Egremont
Rolling Fork
Loch Lomond
Holly Bluff
Red Rock
Campbellsville
Spanish Fort
Enola
Germania
Dump Lake
Lake Dick
Walterville
Centennial Lake
Warrenton
Redwood
Blakely
Foxington
Ferry
Plant
Kerzenmeyer
Whitaker
Pleasant Hill
Bethesda
Edwards
Mount Moriah
Bovina
Flowers
Hubbard
Morning Star
Oakley
Legion
Rocky Springs
Hankinson
Carthage
Utica Junior College
Myles
Lorman
Wilkinson
Rowsdale
Baldwin
Allen
Ferriday
Old railroad grade
Levee
Cutoff
Lake Providence
Tensas River
Bayou Vidal
Lake Bruin
Lake Concordia
Lake St. John
Lake Lee
Lake Mary Dale
Lake Providence